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ABSTRACT

A fluid dynamic bearing cartridge includes a shaft or sleeve adapted to be fixed in place has at least one fluid dynamic bearing supporting the shaft and one or more seals at either end of the shaft. The seal arrangements may include a pair of centrifugal capillary seals at either end of the shaft. Alternatively, a grooved pumping seal or centrifugal capillary seal at one end may be used in combination with a static capillary seal, especially where a journal bearing defined along the shaft near the capillary seal has an imbalanced groove section.